Public Informational Meeting

October 29, 2020

Bridge Rehabilitation or Replacement
NHDOT Project No. 40370 and 40371

Troy 40370
Br. No. 089/114
NH Route 12 over South Branch Ashuelot River

Troy 40371
Br. No. 096/091
NH Route 12 over NHRR (Cheshire Rail Trail)

New Hampshire DOT
Department of Transportation

Meeting Participant Protocols:

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New Hampshire DOT
Department of Transportation

Poll

How were you made aware of tonight's meeting?

- Town Meeting Notice
- Social Media
- Word of Mouth
- NHDOT Project Letter
- NHDOT Website Announcement
- Town Bulletin Board
- Other

New Hampshire DOT Department of Transportation

PRESENTERS

Joe Adams, DOT Project Manager – Introduces Project

Phil Brogan, DOT Project Lead – Bridge, Traffic & Environmental Issues

PANELISTS

Mike Mozer, DOT Senior Project Engineer

Rebecca Martin, DOT Senior Environmental Manager

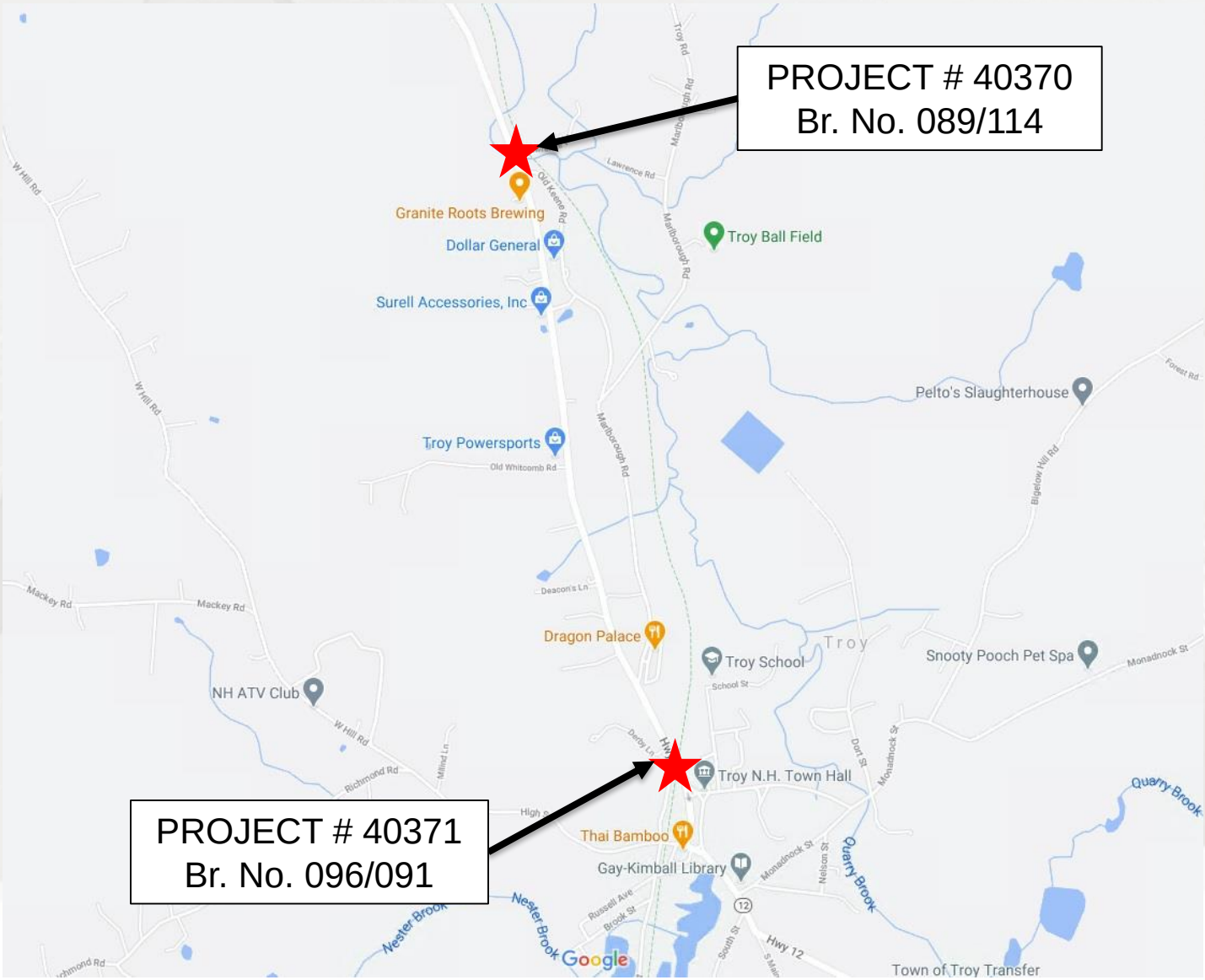
Steve Halloran, Jacobs Design Team

Zach Zavalianos, Jacobs Design Team

John Blackburn, Jacobs Design Team

New Hampshire DOT Department of Transportation

Project Location



Troy 40370 – Bridge 089/114 – NH Route 12 over South Branch Ashuelot River

New Hampshire DOT
Department of Transportation

Project Location

New Hampshire DOT
Department of Transportation

Existing Bridge Details

- Concrete rigid frame structure
- Single 32’-0” span
- 28’-6” curb-to-curb width
- Constructed in 1941
  - Curbs and rails replaced in 1977
- 9,100 vehicles per day, 6% trucks

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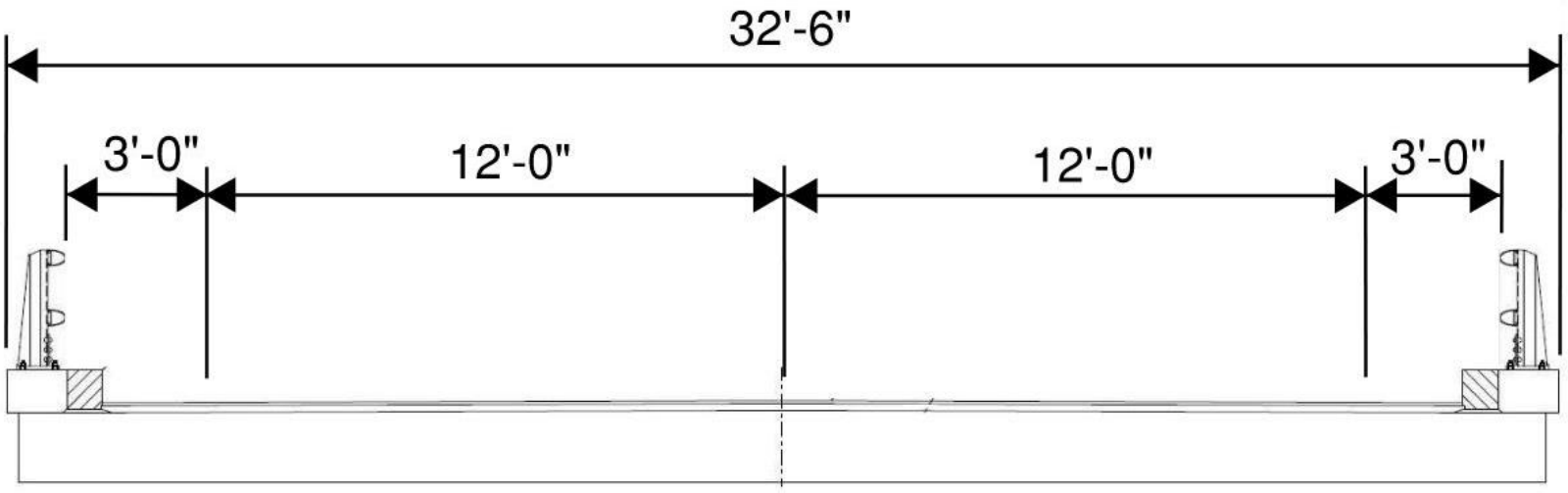
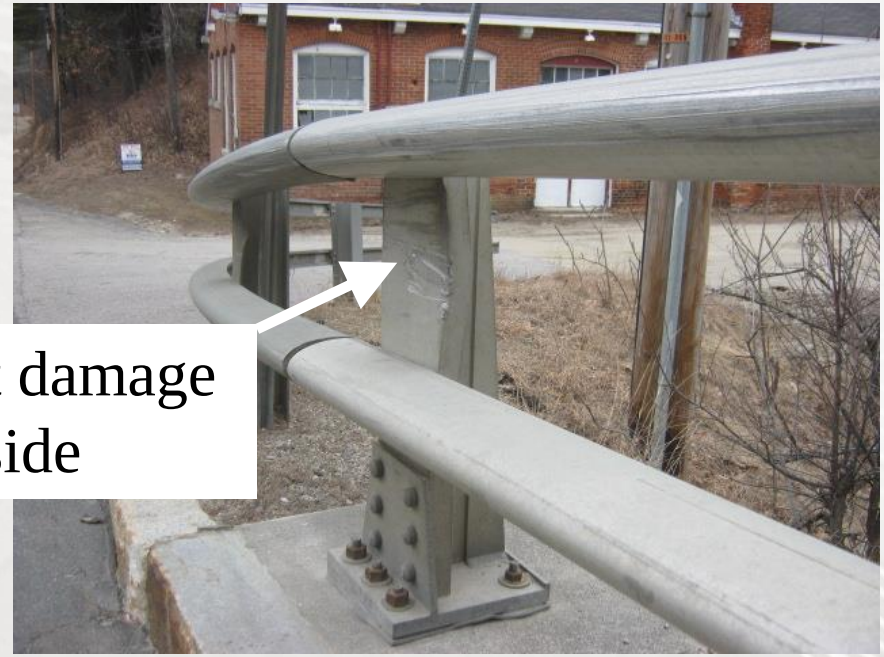
Existing Bridge Details



Deck Section

Existing Bridge Deterioration

Bridge rail post damage typical of east side



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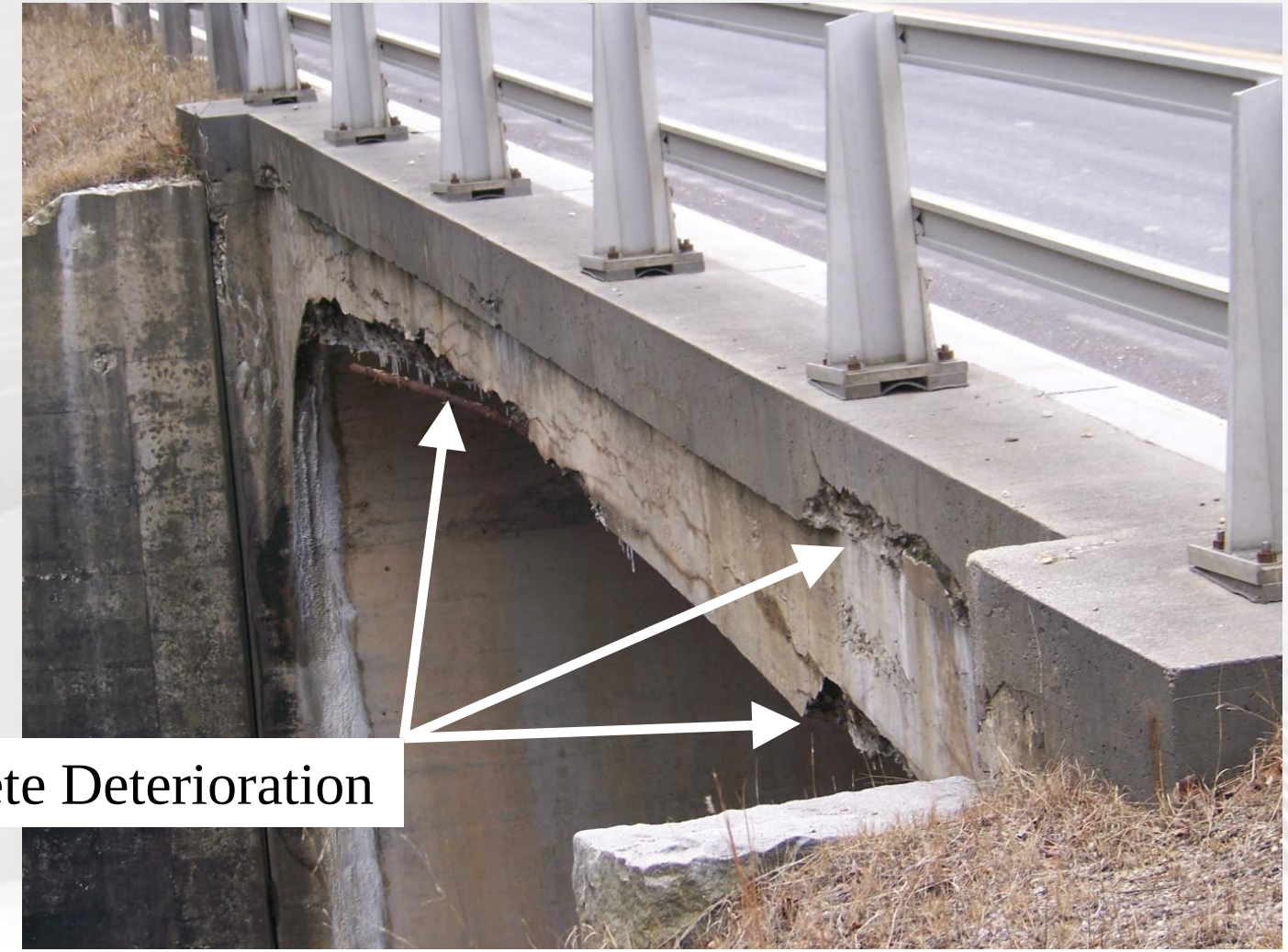
Existing Bridge Deterioration

Existing Bridge Deterioration

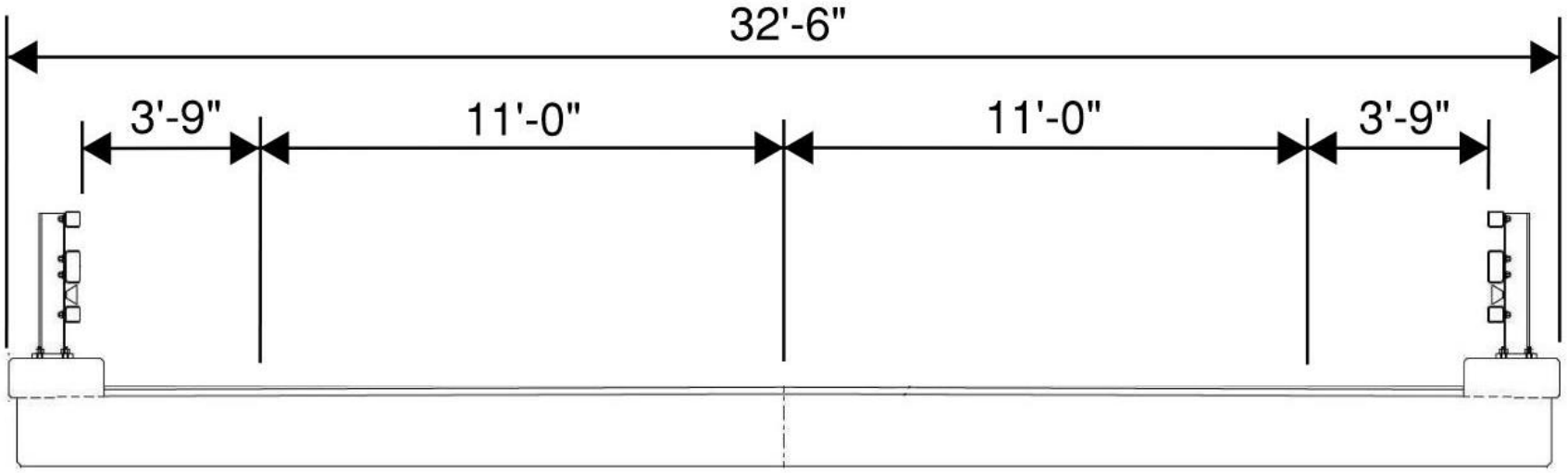


Bridge Rehabilitation Option

- Replace severely deteriorated concrete deck
- Replace bridge and approach rail
- Repair concrete substructure
- This option does not fully address the narrow shoulders and extends the remaining service life of the substructure

New Hampshire DOT
Department of Transportation

Bridge Rehabilitation Option



Deck Section

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Department of Transportation

Bridge Replacement Option

- Replace complete structure
- Lengthen bridge to meet Stream Crossing Rules
- Widen bridge to provide 5’-0” shoulders
- Replace bridge rail and approach rail
- This option provides the greatest service life and addresses all issues

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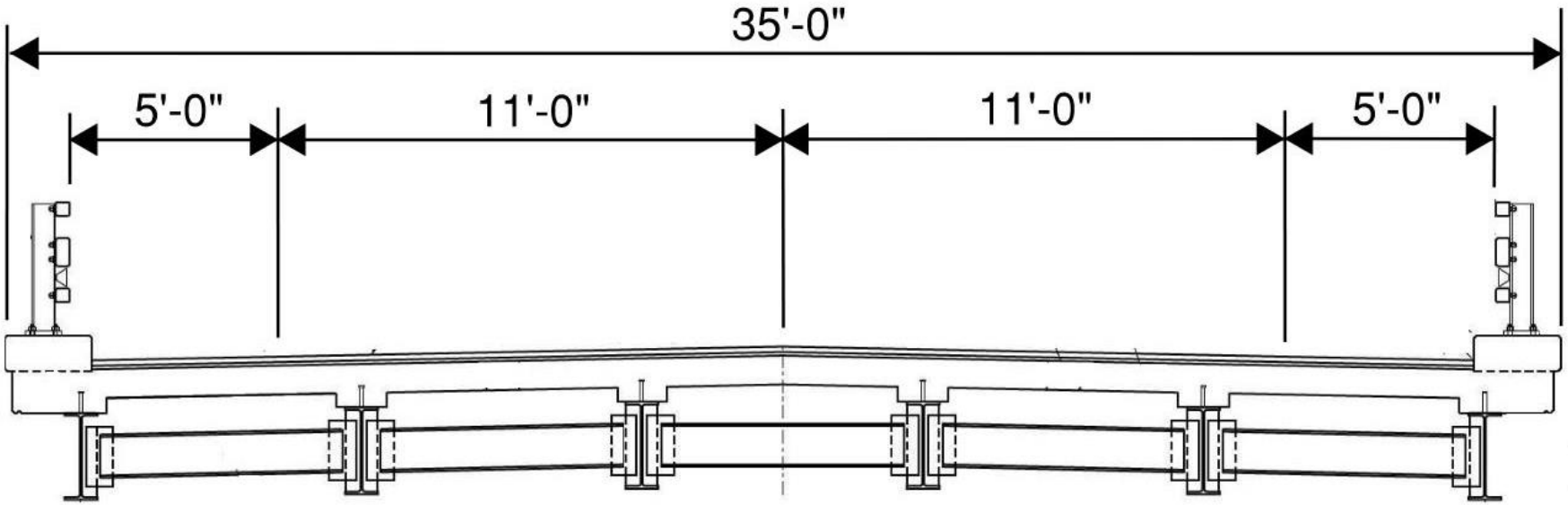
Bridge Replacement Option



Deck Section

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Traffic Control

- Temporary bridge required to maintain traffic during construction
- Temporary signals with one-lane alternating two-way traffic
- 3 possible locations for temporary bridge

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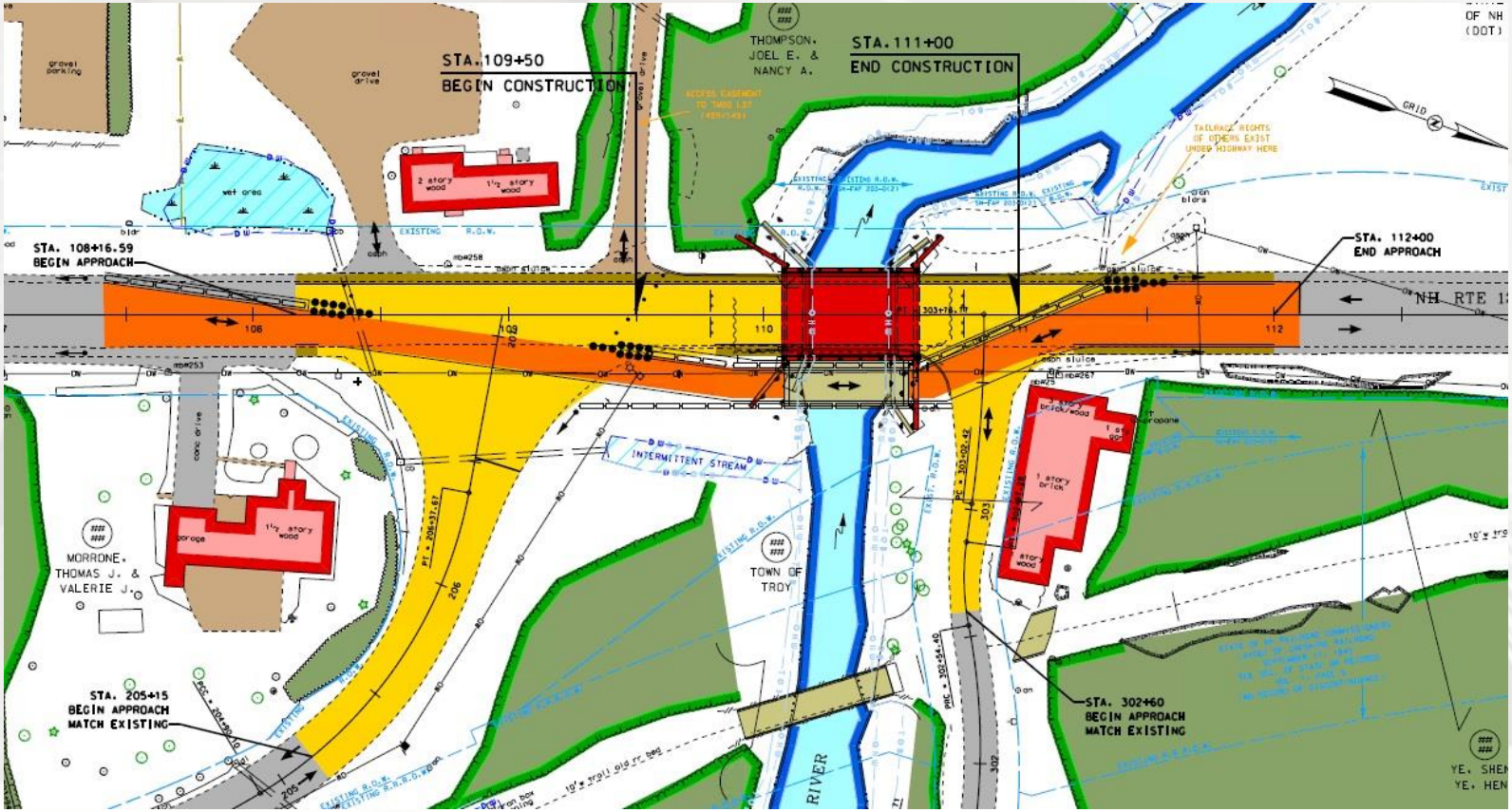
Department of Transportation

Traffic Control

Alternative 1: Temporary bridge on east side of existing bridge



Traffic Control

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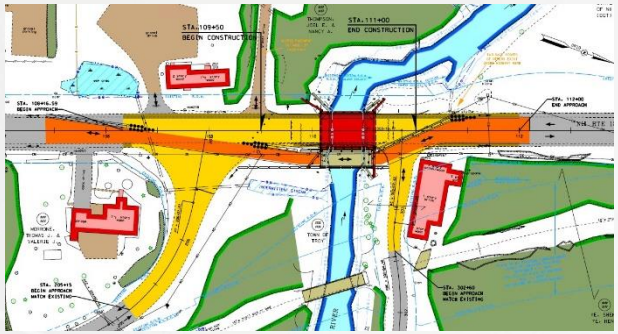
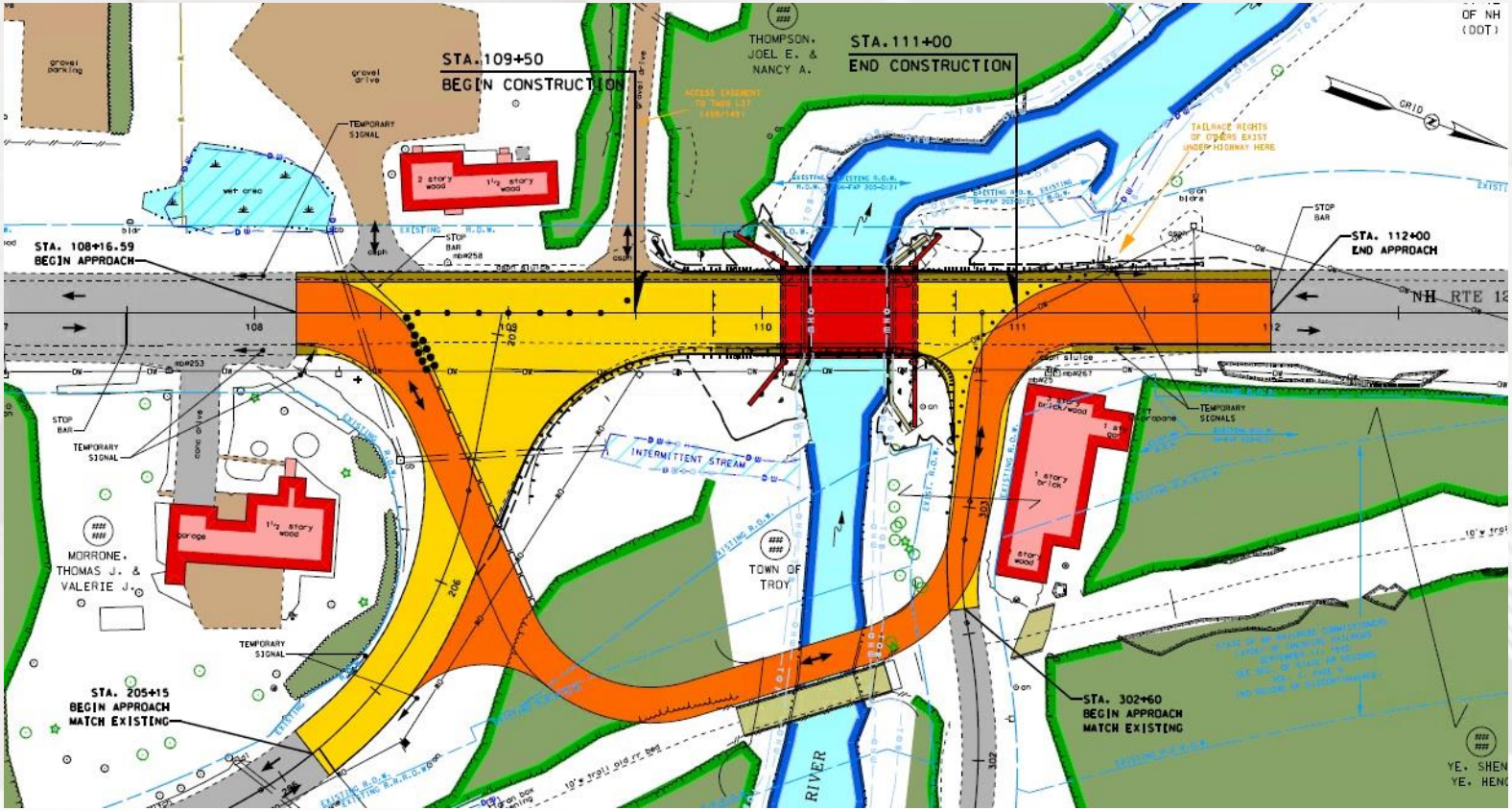


- Sharp turn at north of bridge
- Large trucks will have to drive very slowly
- Utility poles east of bridge will need temporary relocation
- 2 minute traffic delay, except southbound PM delay is 8 minutes

New Hampshire DOT Department of Transportation

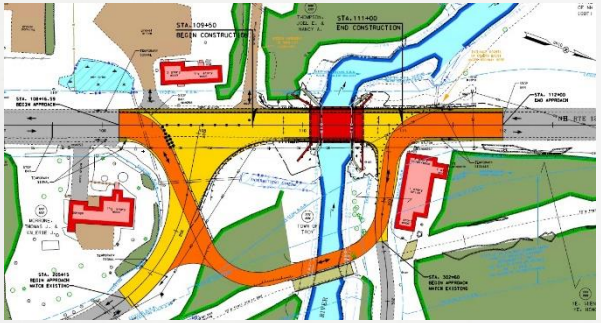
Traffic Control

Alternative 2: Temporary bridge adjacent to rail trail bridge



Traffic Control

Alternative 2: Temporary bridge adjacent to rail trail bridge



- Sharp curvature at multiple locations
- Extensive work to clear trees and construct approach roadway
- Cannot accommodate large trucks
- Limited access to Lawrence Road from the south
- Right-of-Way impacts to Town of Troy, rail trail, and Lawrence Road
- Up to 9 minute delays northbound (AM), 10 minute delays southbound (PM)

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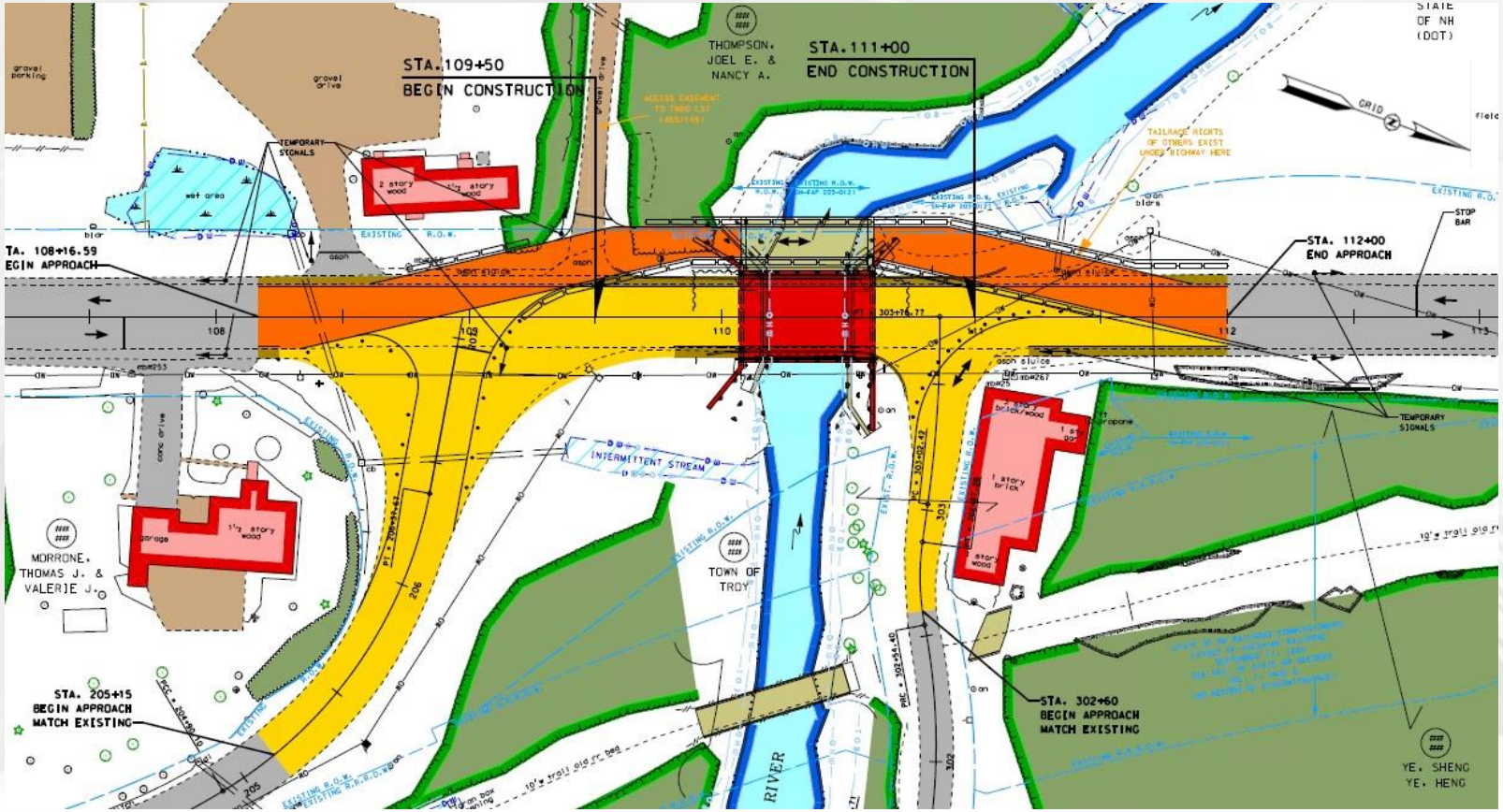
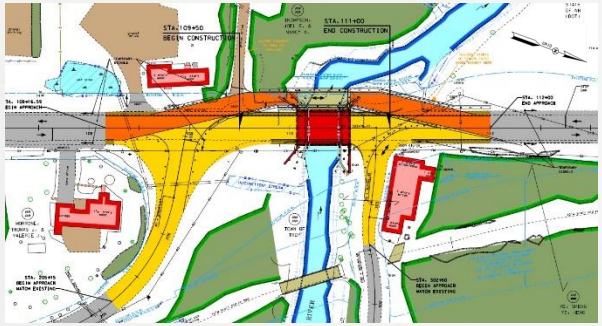
Traffic Control

Alternative 3: Temporary bridge on west side of existing bridge



Traffic Control

Alternative 3: Temporary bridge on west side of existing bridge

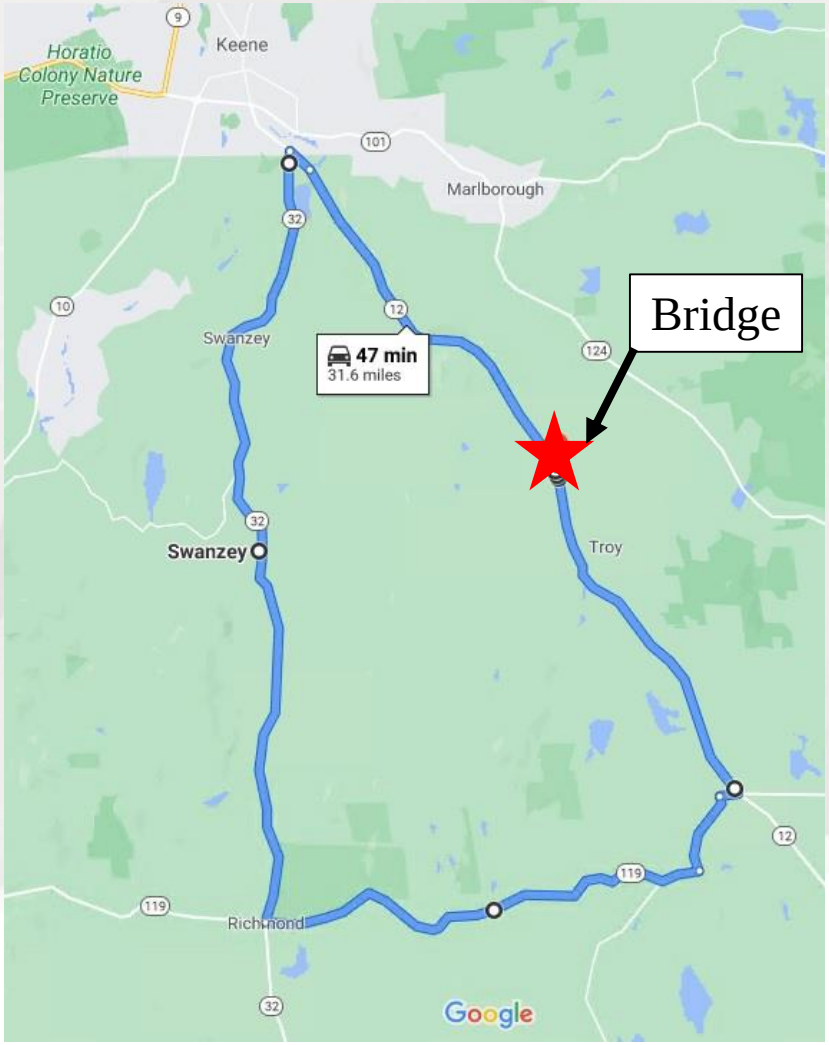


- 35 mph design speed, including for large trucks
- Extensive work for roadway approaches including retaining wall at north side of river
- Right-of-Way impacts to property at SW corner
- Traffic delays of about 2 minutes in each direction

New Hampshire DOT Department of Transportation

Traffic Control

Truck detour required for Alternatives 1 & 2



- Follows state routes:
  - NH 12
  - NH 119
  - NH 32
- 32 miles

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Poll

Out of the three traffic control alternatives presented tonight, which one would you prefer?

- Alternative 1: Temporary bridge to the east of NH Route 12 with a truck detour
- Alternative 2: Temporary bridge adjacent to the rail trail with a truck detour
- Alternative 3: Temporary bridge to the west of NH Route 12 with no truck detour
- No Opinion

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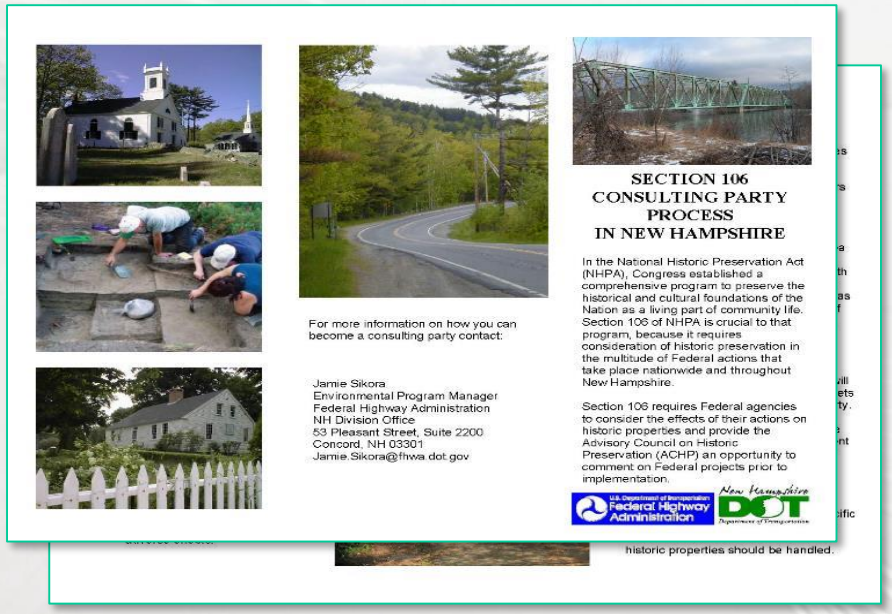
Natural and Cultural Resources

- South Branch Ashuelot River
  - Wetland Permit required for impacts
- Bridge is not eligible for National Register of Historic Places due to loss of integrity
- Bridge lies just beyond the northern boundary of the Forristall Historic District
- Reviewing historic resources in accordance with Section 106
- Potential threatened species
  - Northern Long-eared Bat

New Hampshire DOT Department of Transportation

Historic Resource Consultation

- Anyone with information or concerns about potential historic resources can contact the NHDOT Bureau of Bridge Design or Bureau of Environment.
- To be more formally involved, you can request to participate in project review as a consulting party under Section 106 of the National Historic Preservation Act. Please contact Jamie Sikora at FHWA to request to become a consulting party: Jamie.Sikora@fhwa.dot.gov



https://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/documents/Bureau16consultingpartyhandout-updatedAug2011.pdf

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Project Schedule

- Select Preferred Alternatives and Develop Preliminary Plans – 2020-2021
- Complete the NEPA process (National Environmental Policy Act) – 2021
- Final Design – 2022
- Advertising for Bid – Winter 2022-2023
- Construction – Begins 2023

New Hampshire DOT Department of Transportation

Input is Needed

- Emergency response routes
- Mutual aid
- School bus routes
- Seasonal concerns with construction
- Bike and pedestrian concerns
- Flooding concerns
- Other concerns

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Troy 40371 – Bridge 096/091 – NH Route 12 over NHRR (Cheshire Rail Trail)

New Hampshire DOT
Department of Transportation

Project Location

New Hampshire DOT
Department of Transportation

Existing Bridge Details

- Steel beams with concrete deck
- Two spans totaling 62’-6”
- 30’-0” curb-to-curb width
- 5’-0” sidewalk each side
- 55-degree skew
- Constructed in 1957
  - Beams and rails repainted in 1983
  - Concrete repair in 1997 and 1998
- 9,100 vehicles per day, 6% trucks

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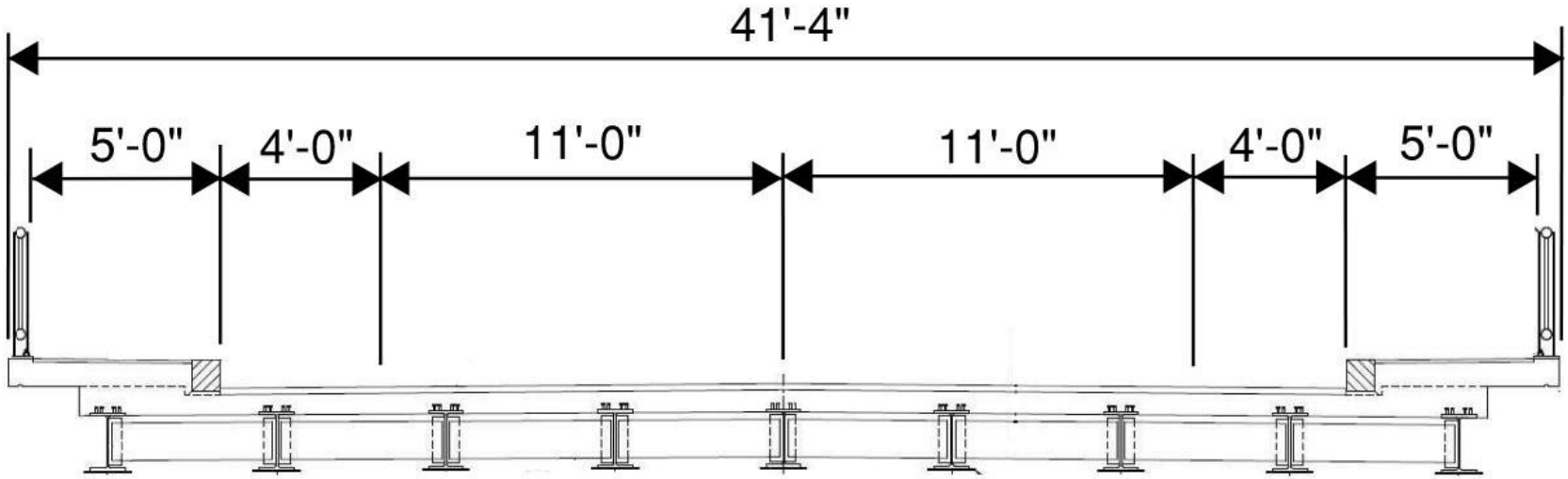
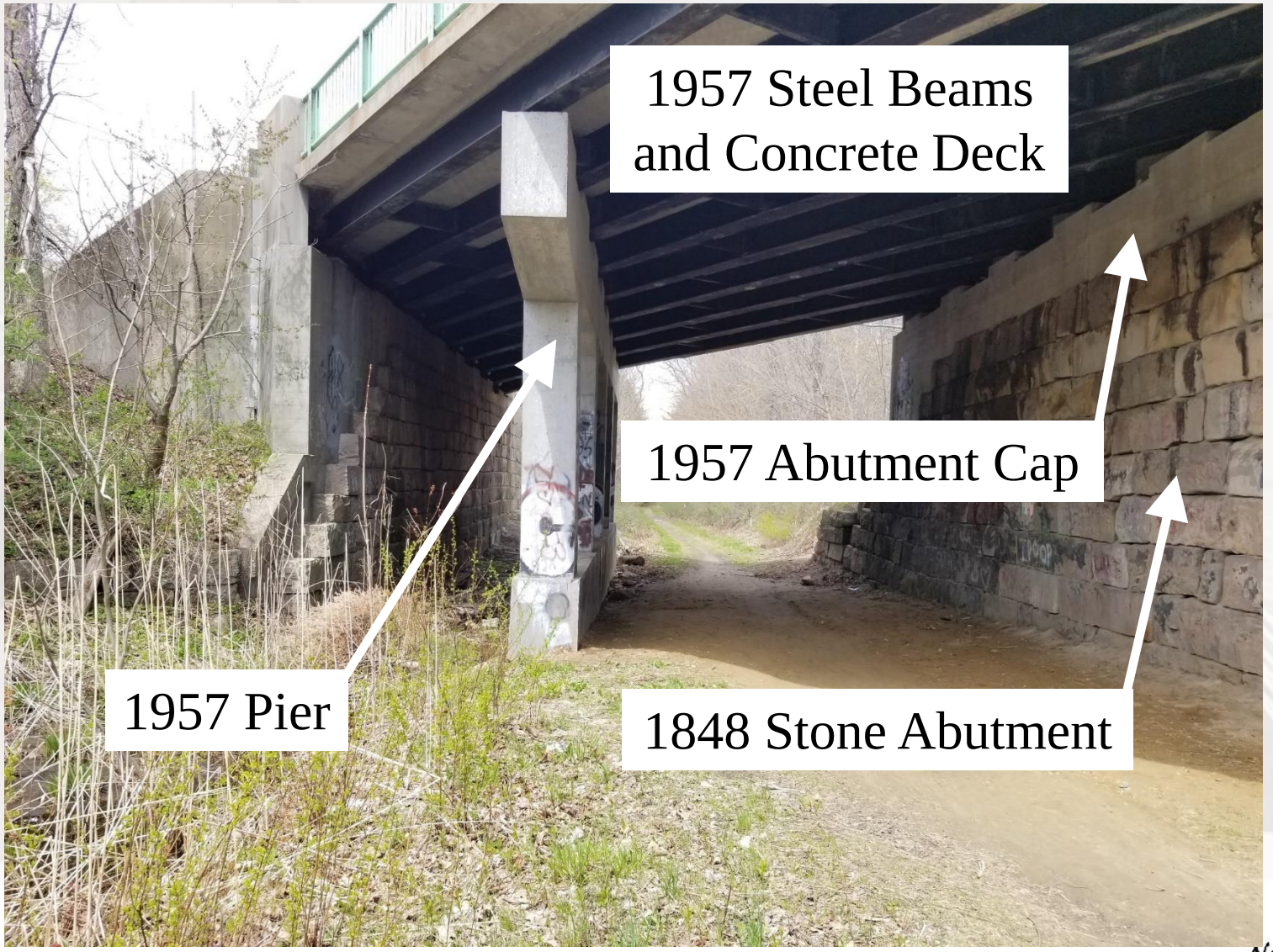
Existing Bridge Details



Deck Section

Existing Bridge Details



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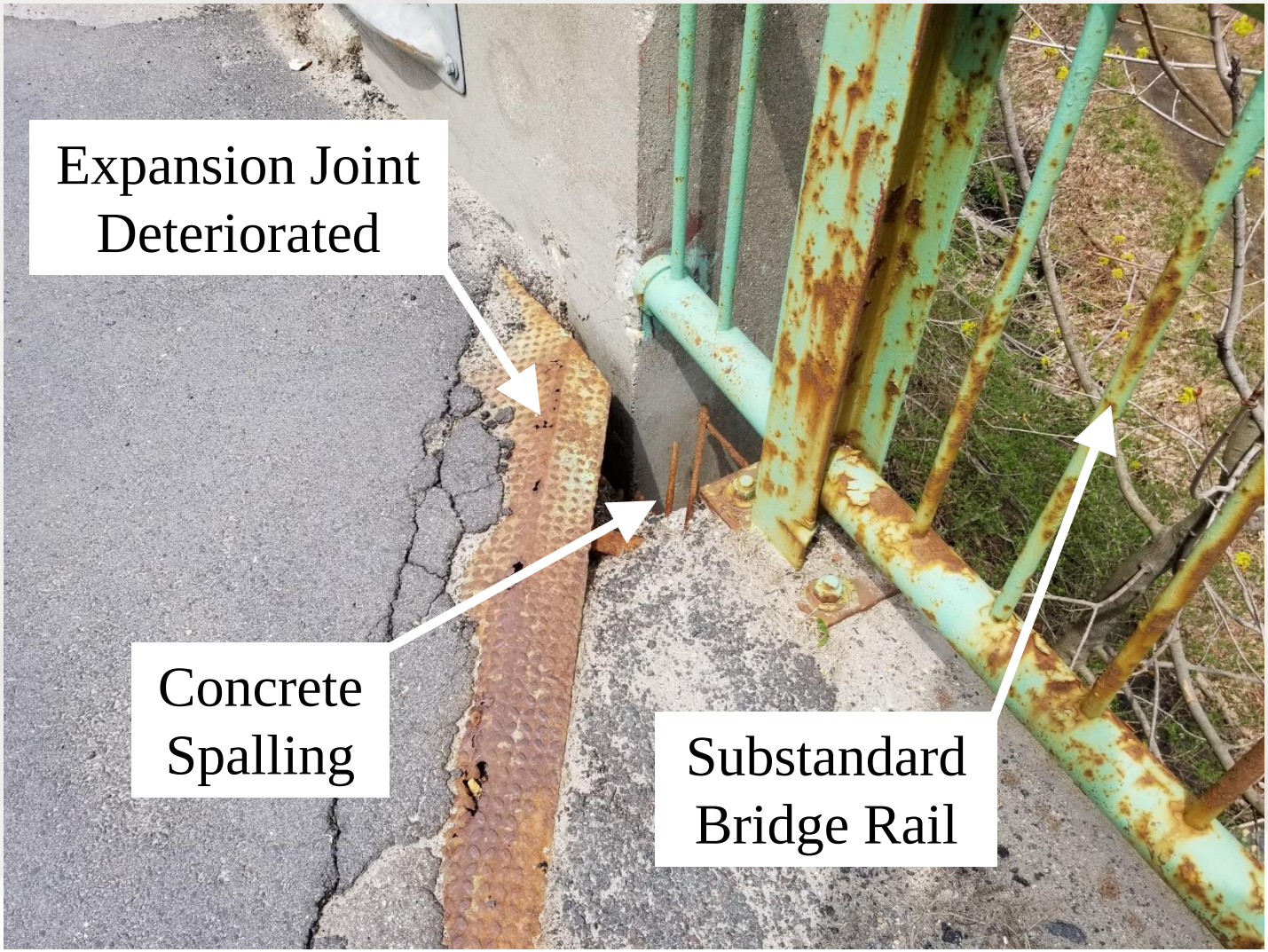
Existing Bridge Deterioration



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Existing Bridge Deterioration

Concrete Deck Cracking and Spalling

Concrete Wing Spalling

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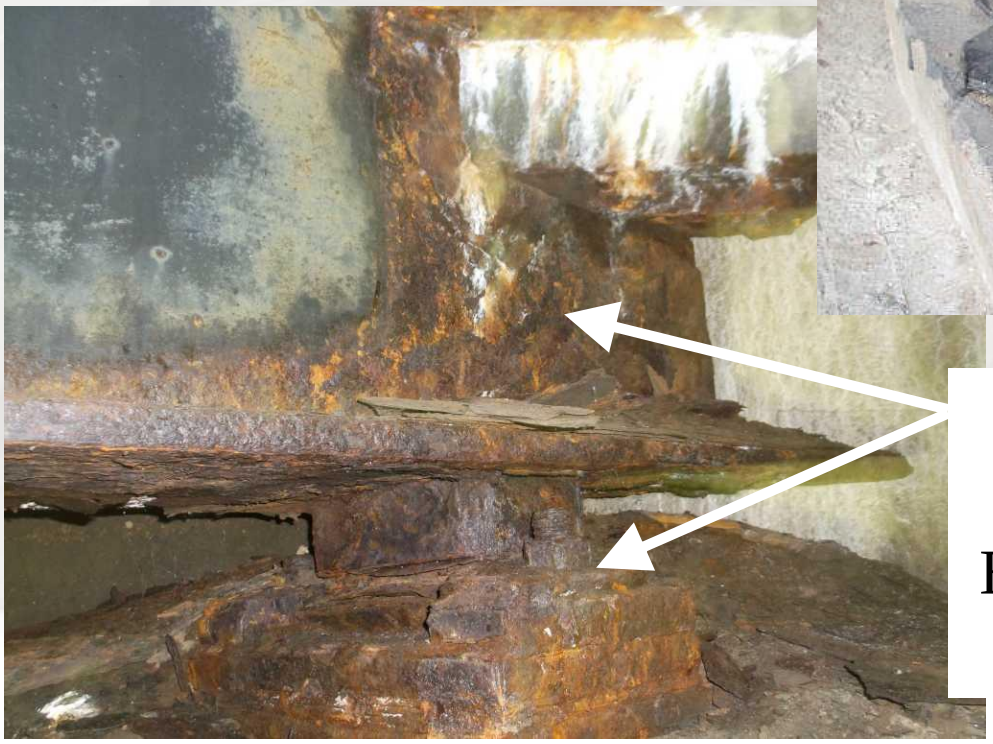
Existing Bridge Deterioration



Severe Corrosion of Beam End and Bearing

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Bridge Rehabilitation Option

- Replace deteriorated concrete deck
- Clean and paint steel beams
- Replace bridge rail and approach rail
- Repair concrete substructure as needed
- This option extends the remaining service life of the superstructure and substructure

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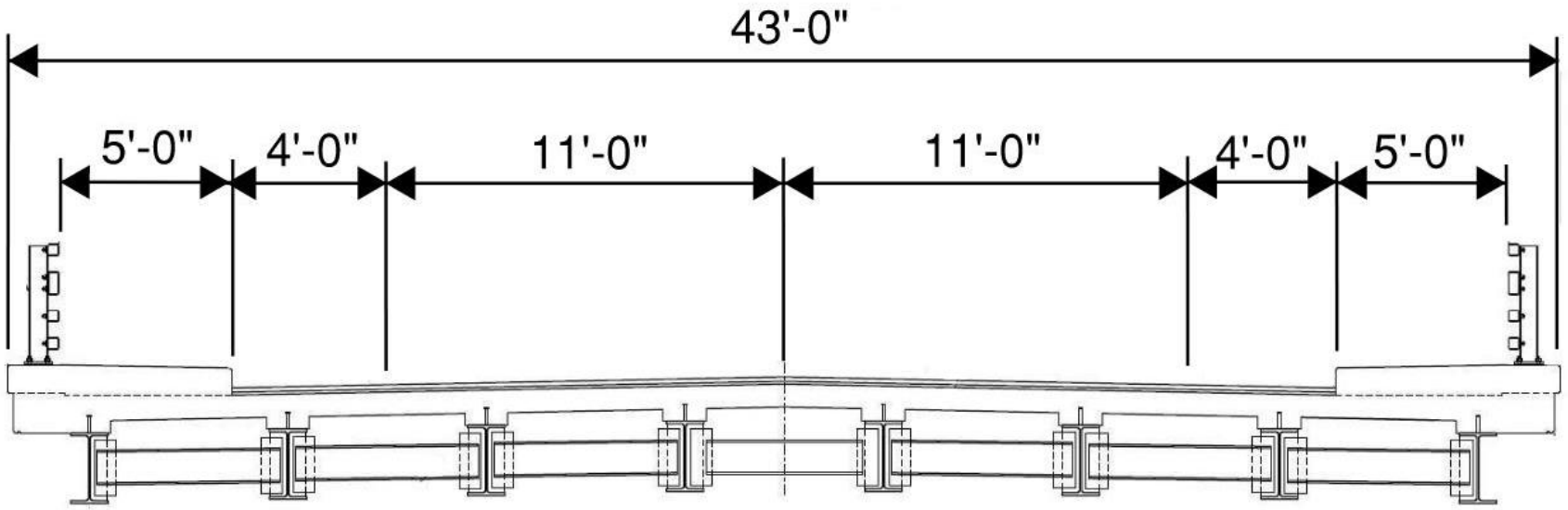
Bridge Rehabilitation Option



Deck Section

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Bridge Replacement Option

- 3 options being considered
  - Alternative 1: Replace steel beams and concrete deck, but retain rehabilitated pier and abutments
  - Alternative 2: Replace entire bridge with a single span, removing the center pier and placing new abutments behind existing abutments
  - Alternative 3: Replace entire bridge with a single span, removing the pier and north abutment, placing new north abutment near existing pier
- Each alternative results in the same cross section

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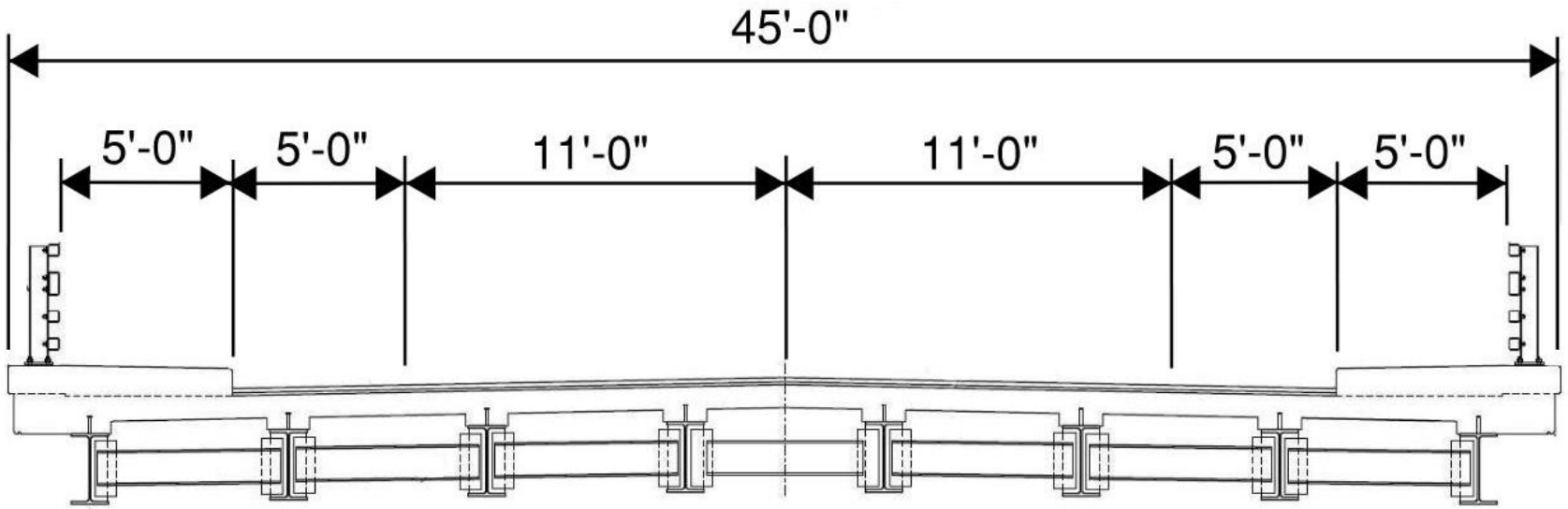
Bridge Replacement Option



Deck Section

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Traffic Control

- 3 alternatives being considered
- Alternatives 1 & 2 maintain traffic on the bridge using phased construction
- Alternative 3 closes the bridge, resulting in a shorter construction timeframe

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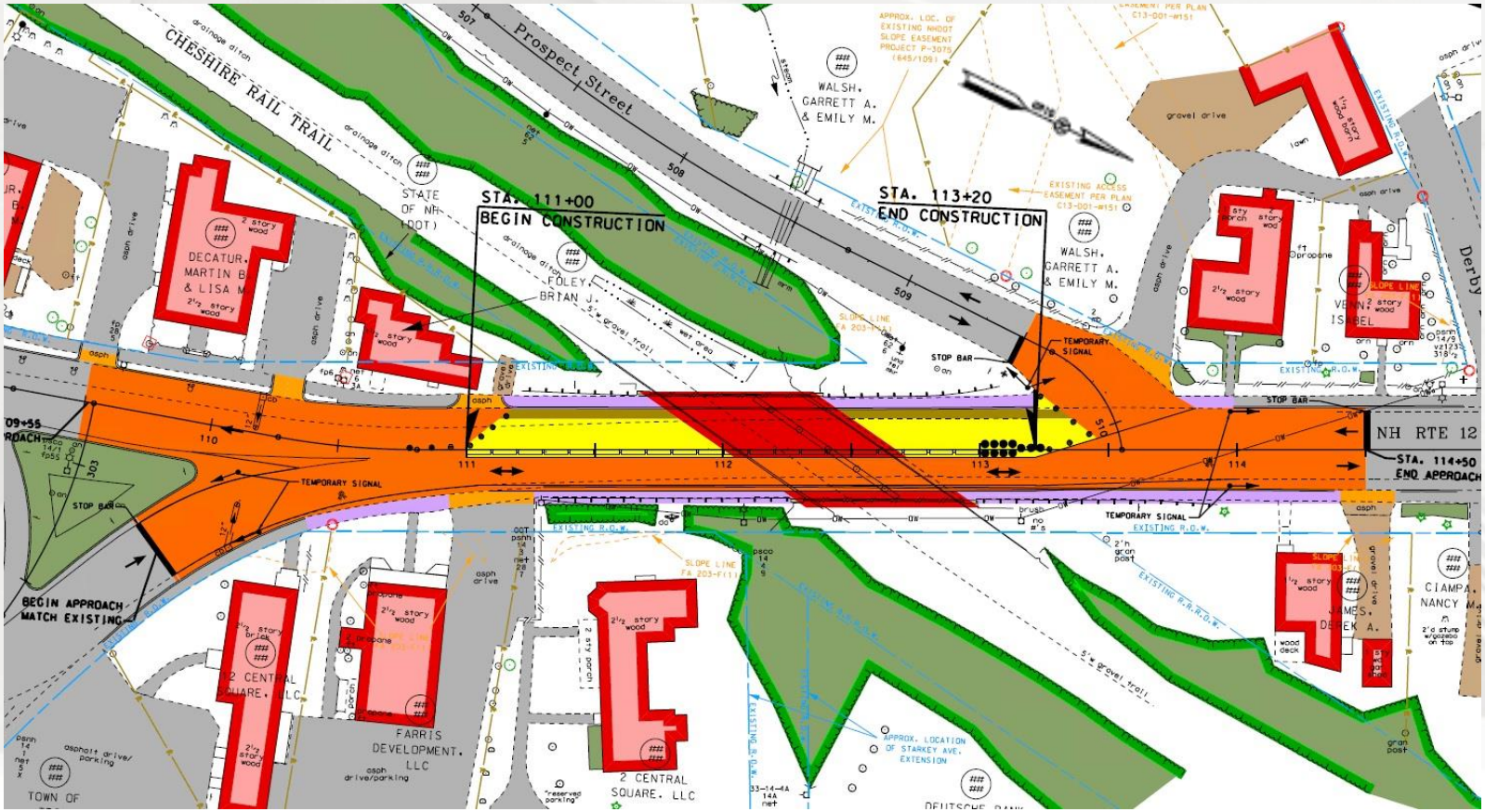
Department of Transportation

Traffic Control

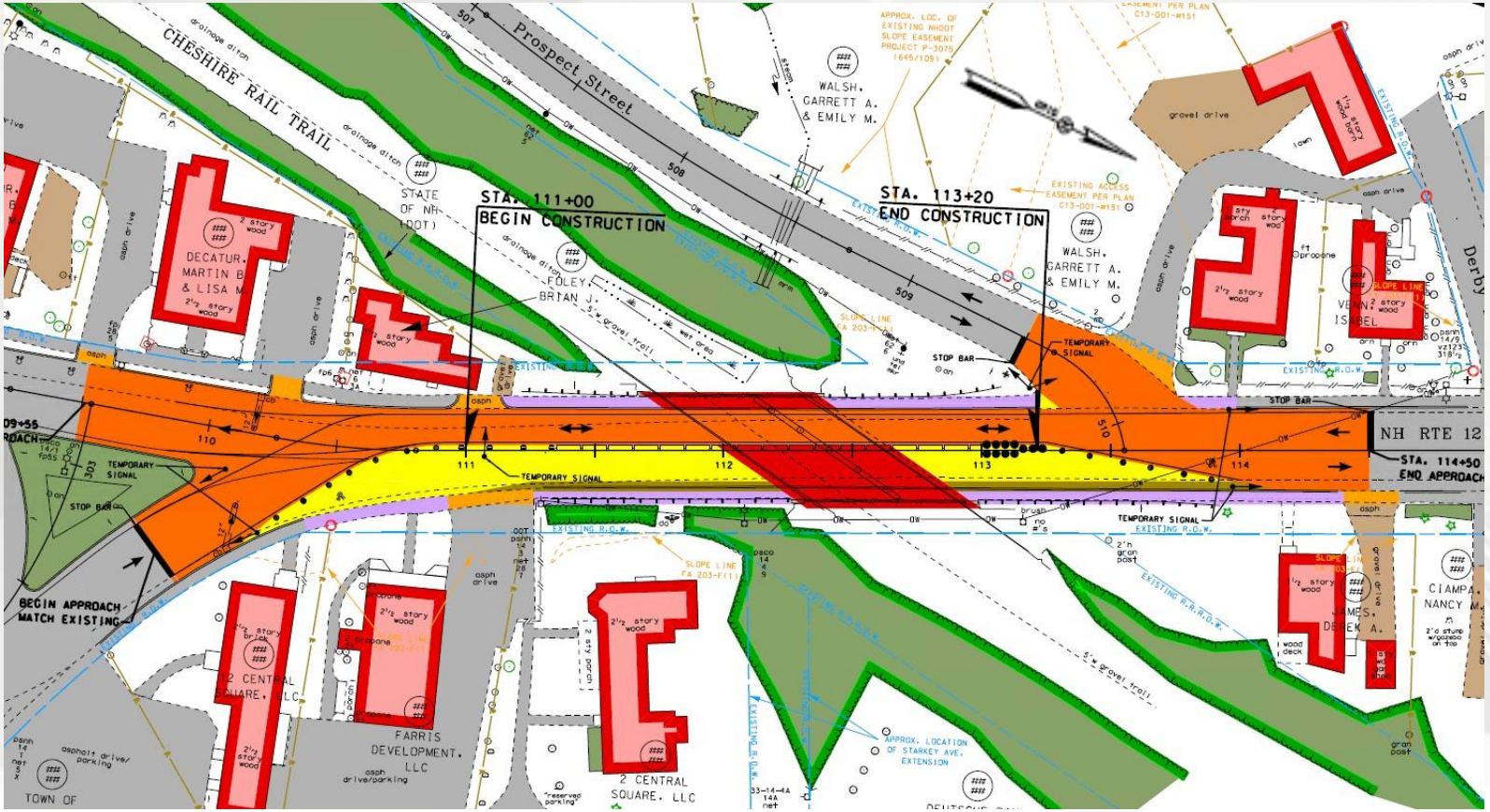
Alternative 1, Phase 1: One lane alternating two-way traffic with temporary signals



New Hampshire DOT
Department of Transportation

Traffic Control

Alternative 1, Phase 2: One lane alternating two-way traffic with temporary signals



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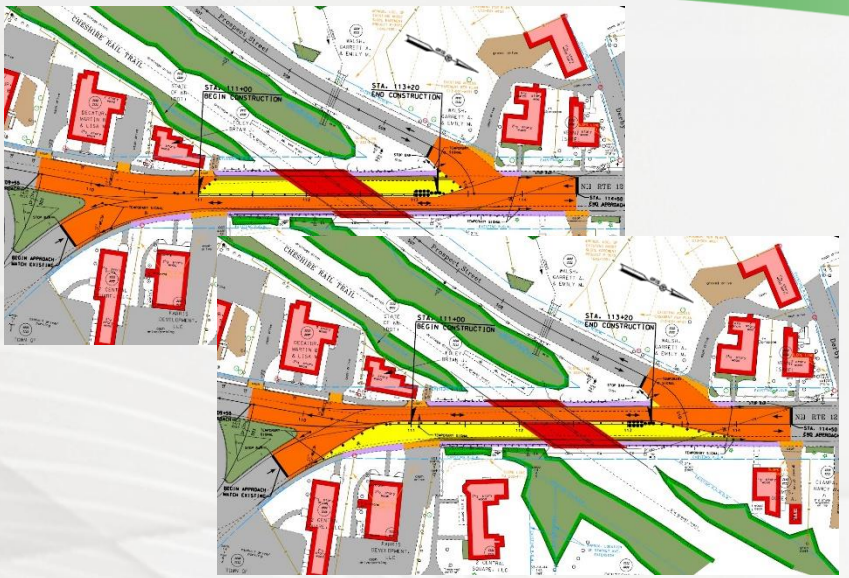
Traffic Control

Alternative 1: One lane alternating two-way traffic with temporary signals



- Phased construction will prolong construction timeframe
- Can accommodate truck traffic NB and SB, no truck detour required
- Northbound traffic delay is 5 minutes (AM), southbound traffic delay is 8 minutes (PM)

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Department of Transportation

Traffic Control

Alternative 2: Northbound traffic maintained on bridge (2 phases), southbound traffic detoured along Prospect Street and High Street

New Hampshire DOT
Department of Transportation

Traffic Control

Alternative 2: Northbound traffic maintained on bridge (2 phases), southbound traffic detoured along Prospect Street and High Street

- Phased construction will prolong construction timeframe
- Southbound truck traffic requires detour
- Southbound traffic will be detoured along local roads
- Traffic delay is 20 seconds

New Hampshire DOT
Department of Transportation

Traffic Control

Alternative 3: Northbound traffic diverted onto temporary bridge west of existing bridge, southbound traffic detoured along Prospect Street and High Street

Traffic Control

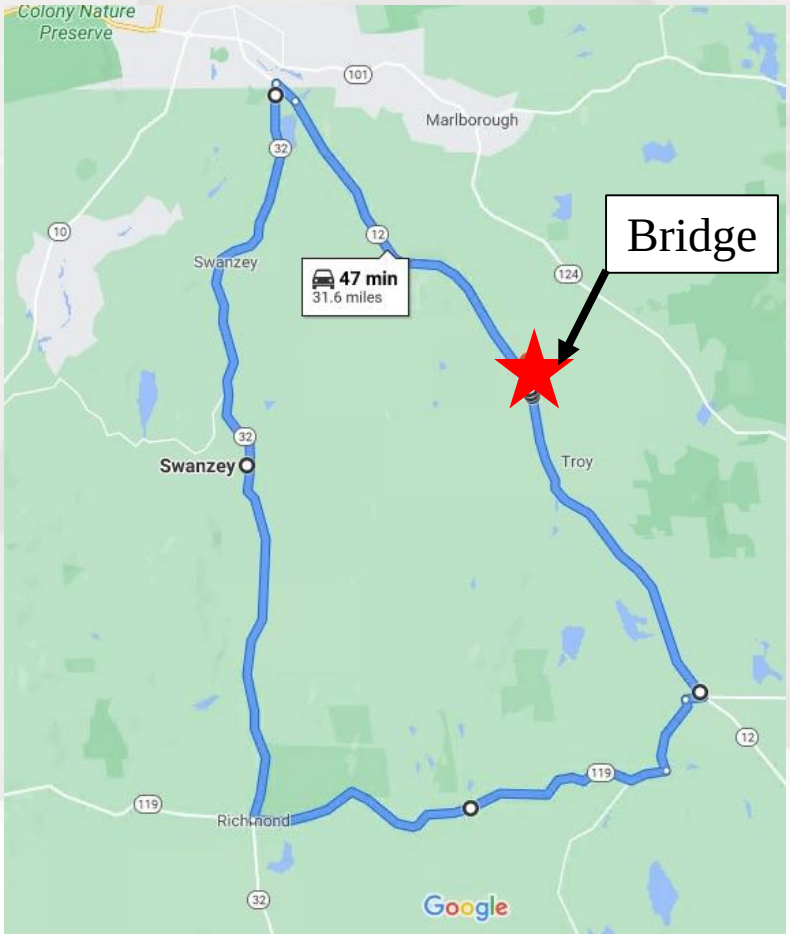
Alternative 3: Northbound traffic diverted onto temporary bridge west of existing bridge, southbound traffic detoured along Prospect Street and High Street

- Temporary bridge shortens construction timeframe due to not being phased
- Temporary bridge requires considerable fill, will result in wetland impacts and impacts to property at SW corner, and introduces sharp curvature at the north end
- Southbound truck traffic requires detour
- Southbound detour along local roads
- ROW impacts to rail trail
- Traffic delay is 20 seconds

New Hampshire DOT Department of Transportation

Traffic Control

Truck detour required for southbound traffic with Alternatives 2 & 3



- Follows state routes:
  - NH 12
  - NH 119
  - NH 32
- 32 miles

New Hampshire DOT
Department of Transportation

Poll

Out of the three traffic control alternatives presented tonight, which one would you prefer?

- Alternative 1: Traffic maintained on bridge in both directions using temporary signals to alternate direction
- Alternative 2: Northbound traffic maintained on bridge, southbound traffic detoured along Prospect St and High St
- Alternative 3: Temporary bridge for northbound traffic, southbound traffic detoured along Prospect St and High St
- No Opinion

New Hampshire DOT Department of Transportation

Natural and Cultural Resources

- Wetland Permit may be required for wetland adjacent to rail trail
- Bridge is contributing resource within Troy Village Historic District
- Cheshire Rail Trail potentially eligible for the National Register of Historic Places
- Nearby historic homes >50 years old
- Reviewing historic resources in accordance with Section 106
- Potential threatened species
  - Northern long-eared bat

New Hampshire DOT Department of Transportation

Historic Resource Consultation

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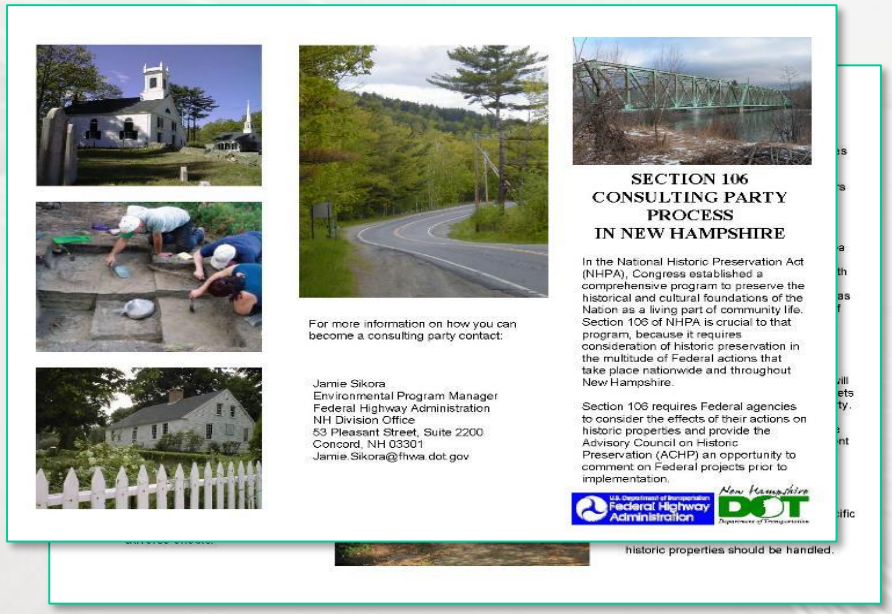

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Department of Transportation

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- Mutual aid
- School bus routes
- Seasonal concerns with construction
- Bike and pedestrian concerns
- Historic concerns
- Other concerns

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Department of Transportation

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Department of Transportation

Poll

With 1 being "poor" and 5 "very good" how would you rate your experience with tonight's Public Informational Meeting via Zoom?

New Hampshire DOT
Department of Transportation

Contact Information:

- Project Manager – Joe Adams, P.E.
- Email – Joseph.C.AdamsJr@dot.nh.gov
- Telephone – (603) 271-2731

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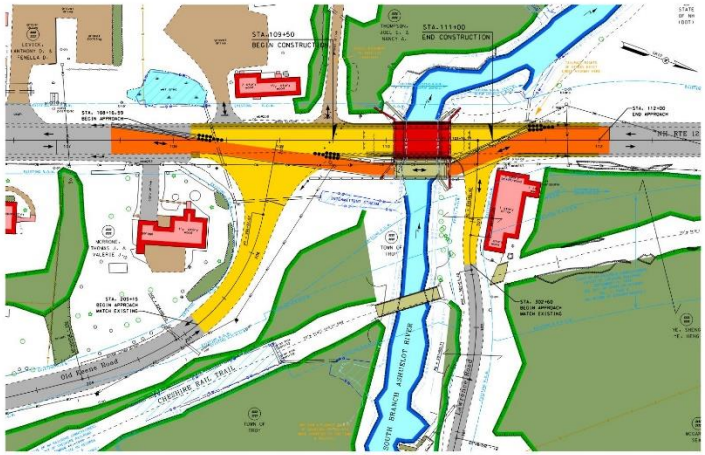
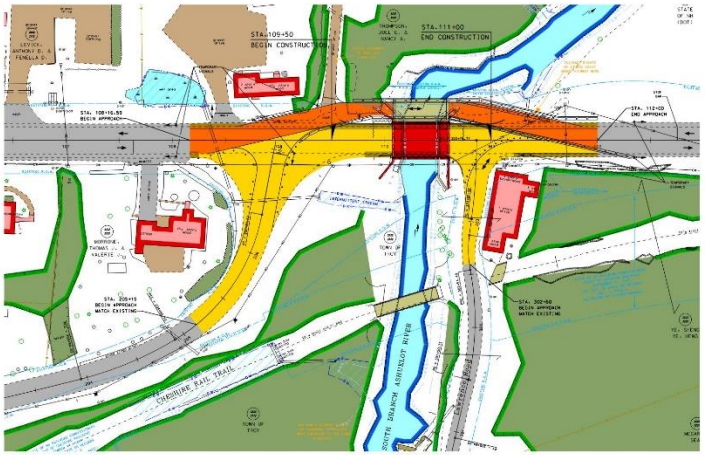
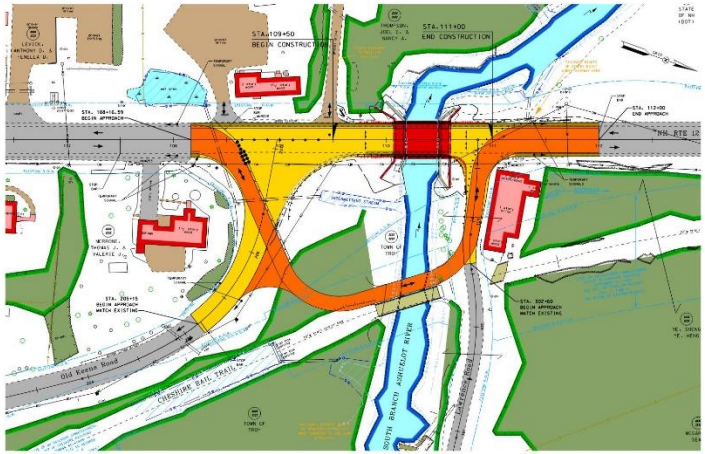
Department of Transportation



MOT ALTERNATIVE 1



MOT ALTERNATIVE 3



MOT ALTERNATIVE 2

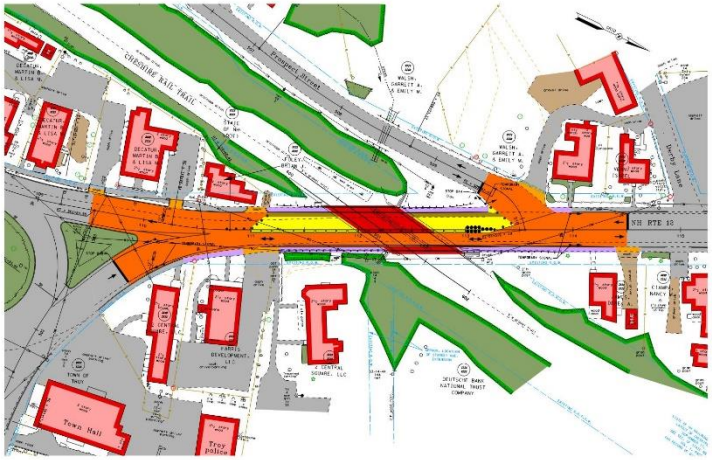
TROY 40370
TROY, NEW HAMPSHIRE

N.H. 12 OVER SOUTH BRANCH ASHUELOT RIVER
BRIDGE NO. 089/114

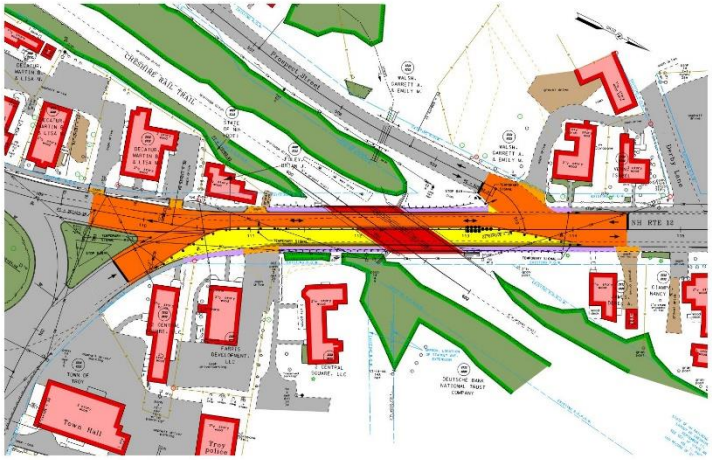
JACOBS
TWO EXECUTIVE PARK DRIVE, SUITE 205
BEDFORD, NEW HAMPSHIRE 03110
T.603.666.7181

SCALE: 1" = 50'	DRAWN BY: SMG	DATE: 10/14/2020	MOT Alternatives.dgn

New Hampshire DOT
Department of Transportation

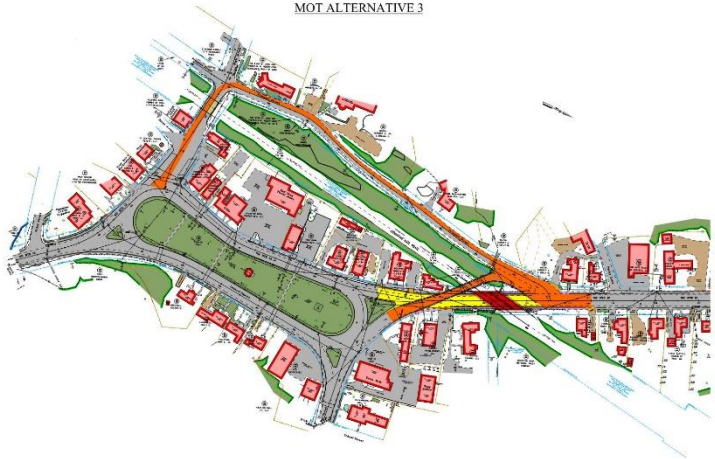


MOT ALTERNATIVE 1A



MOT ALTERNATIVE 1B

MOT ALTERNATIVE 3



MOT ALTERNATIVE 4

TROY 40371

TROY, NEW HAMPSHIRE

N.H. 12 OVER NH Railroad (Abd.)
BRIDGE NO. 096/091

JACOBS
TWO EXECUTIVE PARK DRIVE, SUITE 205
BEDFORD, NEW HAMPSHIRE 03110
T.603.666.7181

SCALE: VARIES	DRAWN BY: SMG	DATE: 10/14/2020	MOT Alternatives.dgn

New Hampshire DOT
Department of Transportation